



1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/303,518D

DATE: 01/31/2002

TIME: 14:24:33

Input Set : N:\COPIES\seqlist.txt

Output Set: N:\CRF3\01312002\I303518D.raw

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3 <110> APPLICANT: Scarlato, Vincenzo
 4 Massignani, Vega
 5 Rappuoli, Rino
 6 Pizza, Mariagrazia
 7 Grandi, Guido
 9 <120> TITLE OF INVENTION: Neisserial Antigens
 11 <130> FILE REFERENCE: CHIR0160
 13 <140> CURRENT APPLICATION NUMBER: 09/303,518D
 14 <141> CURRENT FILING DATE: 1999-04-30
 16 <160> NUMBER OF SEQ ID NOS: 1098
 18 <170> SOFTWARE: PatentIn version 3.1
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 22 <212> TYPE: DNA
 23 <213> ORGANISM: Neisseria meningitidis
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 26 <221> NAME/KEY: misc_feature
 27 <222> LOCATION: (66)..(66)
 28 <223> OTHER INFORMATION: N= Unknown
 30 <220> FEATURE:
 31 <221> NAME/KEY: misc_feature
 32 <222> LOCATION: (483)..(483)
 33 <223> OTHER INFORMATION: N= Unknown
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 38 agcagcccaa tacaatttgg gcgcaatgta ttacaaagga cgcgcgtgcg ccgggatgat 180
 39 gctgaagcgg tcagatggta tcggcagccg gcggaacagg ggtagccca agcccaatac 240
 40 aatttgggct ggatgtatgc caacggggcg gcgtgcgcca agatgatacc gaagcgggtca 300
 41 gatggtatcg gcaggcggca gcgcaggggg ttgtccaagc ccaatacaat ttgggcgtga 360
 42 tatatgccga aggacgtgga gtgcgccaag acgatgtcga agcggtcaga tggtttcggc 420
 43 aggcggcagc gcagggggta gcccaagccc aaaacaattt gggcgtgatg tatgccgaaa 480
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 53 <222> LOCATION: (6)..(6)
 54 <223> OTHER INFORMATION: Xaa= any amino acid
 56 <220> FEATURE:
 57 <221> NAME/KEY: misc_feature

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58 <222> LOCATION: (23)..(24)
59 <223> OTHER INFORMATION: Xaa= any amino acid
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63 <222> LOCATION: (34)..(34)
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79 <223> OTHER INFORMATION: Xaa= any amino acid
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      86 20 25 30
W--> 88 Leu Xaa Ala Ala Ala Gln Gly Asn Ala Ala Ala Gln Tyr Asn Leu Gly
      89 35 40 45
W--> 91 Ala Met Tyr Xaa Gln Arg Thr Arg Val Arg Arg Asp Asp Ala Glu Ala
      92 50 55 60
      94 Val Arg Trp Tyr Arg Gln Pro Ala Glu Gln Gly Leu Ala Gln Ala Gln
      95 65 70 75 80
W--> 97 Tyr Asn Leu Gly Trp Met Tyr Ala Asn Gly Arg Xaa Val Arg Gln Asp
      98 85 90 95
      100 Asp Thr Glu Ala Val Arg Trp Tyr Arg Gln Ala Ala Ala Gln Gly Val
      101 100 105 110
      103 Val Gln Ala Gln Tyr Asn Leu Gly Val Ile Tyr Ala Glu Gly Arg Gly
      104 115 120 125
      106 Val Arg Gln Asp Asp Val Glu Ala Val Arg Trp Phe Arg Gln Ala Ala
      107 130 135 140
      109 Ala Gln Gly Val Ala Gln Ala Gln Asn Asn Leu Gly Val Met Tyr Ala
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117 <212> TYPE: DNA
118 <213> ORGANISM: Neisseria meningitidis
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122 gtgtgggcgg atgacgtatc ggattttcgg gaaaacttgc aggcggcagc acagggaaat 120
123 gcagcagccc aatacaattt gggcgcaatg tattacaaag gacgcggcgt gcgcccgggat 180

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126 gtcagatggt atcggcaggc ggcagcgagc ggggttgtcc aagcccaata caatttgggc      360
127 gtgatatatg ccgaaggacg tggagtgcgc caagacgatg tcgaagcggc cagatggttt      420
128 cggcaggcgg cagcgagggg ggtagcccaa gcccaaaaca atttgggcgt gatgtatgcc      480
129 gaaagacgcg gcgtgcgcca agaccgcgcc cttgcacaag aatggtttgg caaggcttgt      540
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133 <211> LENGTH: 198
134 <212> TYPE: PRT
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141 Leu Asn Arg Ala Val Trp Ala Asp Asp Val Ser Asp Phe Arg Glu Asn
142 20 25 30
144 Leu Gln Ala Ala Ala Gln Gly Asn Ala Ala Ala Gln Tyr Asn Leu Gly
145 35 40 45
147 Ala Met Tyr Tyr Lys Gly Arg Gly Val Arg Arg Asp Asp Ala Glu Ala
148 50 55 60
150 Val Arg Trp Tyr Arg Gln Ala Ala Glu Gln Gly Leu Ala Gln Ala Gln
151 65 70 75 80
153 Tyr Asn Leu Gly Trp Met Tyr Ala Asn Gly Arg Gly Val Arg Gln Asp
154 85 90 95
156 Asp Thr Glu Ala Val Arg Trp Tyr Arg Gln Ala Ala Ala Gln Gly Val
157 100 105 110
159 Val Gln Ala Gln Tyr Asn Leu Gly Val Ile Tyr Ala Glu Gly Arg Gly
160 115 120 125
162 Val Arg Gln Asp Asp Val Glu Ala Val Arg Trp Phe Arg Gln Ala Ala
163 130 135 140
165 Ala Gln Gly Val Ala Gln Ala Gln Asn Asn Leu Gly Val Met Tyr Ala
166 145 150 155 160
168 Glu Arg Arg Gly Val Arg Gln Asp Arg Ala Leu Ala Gln Glu Trp Phe
169 165 170 175
171 Gly Lys Ala Cys Gln Asn Gly Asp Gln Asp Gly Cys Asp Asn Asp Gln
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174 Arg Leu Lys Ala Gly Tyr
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177 <210> SEQ ID NO: 5
178 <211> LENGTH: 273
179 <212> TYPE: DNA
180 <213> ORGANISM: Neisseria meningitidis
182 <400> SEQUENCE: 5
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184 gtgtgggagg atgacgtatc ggattttcgg gaaaacttgc aggcggcagc acagggaaat      120
185 gcagcagccc aaaacaattt gggcgtgatg tatgccgaaa gacgcggcgt gcgccaagac      180
186 cgcgcccttg cacaagaatg gcttggcaag gcttgtcaaa acggatacca agacagctgc      240
187 gacaatgacc aacgcctgaa agcgggttat tga
188 273
189 <210> SEQ ID NO: 6

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191 <212> TYPE: PRT
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198 Leu Asn Gln Ala Val Trp Ala Asp Asp Val Ser Asp Phe Arg Glu Asn
199 20 25 30
201 Leu Gln Ala Ala Gln Gly Asn Ala Ala Ala Gln Asn Asn Leu Gly
202 35 40 45
204 Val Met Tyr Ala Glu Arg Arg Gly Val Arg Gln Asp Arg Ala Leu Ala
205 50 55 60
207 Gln Glu Trp Leu Gly Lys Ala Cys Gln Asn Gly Tyr Gln Asp Ser Cys
208 65 70 75 80
210 Asp Asn Asp Gln Arg Leu Lys Ala Gly Tyr
211 85 90
213 <210> SEQ ID NO: 7
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215 <212> TYPE: DNA
216 <213> ORGANISM: Neisseria gonorrhoeae
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220 gtgtgggcgg gtgacgtatc ggattttcgg gaaaacttgc aggcggcaga acagggaaat 120
221 gcagcagccc aattcaattt gggcgtgatg tatgaaaatg gacaaggagt tcgtcaagat 180
222 tatgtacagg cagtgcagtg gtatcgcaag gcttcagaac aaggggatgc ccaagcccaa 240
223 tacaatttgg gcttgatgta ttacgatgga cgcggcgtgc gccaaagacct tgcgctcgct 300
224 caacaatggc ttggcaaggc ttgtcaaaac ggagacccaa acagctgcga caatgaccaa 360
225 cgctgaagg cgggttatta a 381
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234 1 5 10 15
236 Leu Asn Gln Ala Val Trp Ala Gly Asp Val Ser Asp Phe Arg Glu Asn
237 20 25 30
239 Leu Gln Ala Ala Glu Gln Gly Asn Ala Ala Ala Gln Phe Asn Leu Gly
240 35 40 45
242 Val Met Tyr Glu Asn Gly Gln Gly Val Arg Gln Asp Tyr Val Gln Ala
243 50 55 60
245 Val Gln Trp Tyr Arg Lys Ala Ser Glu Gln Gly Asp Ala Gln Ala Gln
246 65 70 75 80
248 Tyr Asn Leu Gly Leu Met Tyr Tyr Asp Gly Arg Gly Val Arg Gln Asp
249 85 90 95
251 Leu Ala Leu Ala Gln Gln Trp Leu Gly Lys Ala Cys Gln Asn Gly Asp
252 100 105 110
254 Gln Asn Ser Cys Asp Asn Asp Gln Arg Leu Lys Ala Gly Tyr
255 115 120 125

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264 gggcgcgctcg ggcctatcgg acttgaccgg aaatcctatc aggcgagggg gcgcctcgat      120
265 ttggacggca agtatcagtt cagcagcgac gtttccgcgc aaatcctgac ttcsggactt      180
266 ttggggcgagc agtacatcgg gctgcagcag ggcgggcgaca cggaaaacct tgctgccggc      240
267 gacaccatct ccgtaaccag ttctgcaatg gttctggaaa accttatcgg caaattcatg      300
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270 <210> SEQ ID NO: 10
271 <211> LENGTH: 118
272 <212> TYPE: PRT
273 <213> ORGANISM: Neisseria meningitidis
275 <400> SEQUENCE: 10
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277 1 5 10 15
279 Gly Val Leu Val Gly Arg Val Gly Ala Ile Gly Leu Asp Pro Lys Ser
280 20 25 30
282 Tyr Gln Ala Arg Val Arg Leu Asp Leu Asp Gly Lys Tyr Gln Phe Ser
283 35 40 45
285 Ser Asp Val Ser Ala Gln Ile Leu Thr Ser Gly Leu Leu Gly Glu Gln
286 50 55 60
288 Tyr Ile Gly Leu Gln Gln Gly Gly Asp Thr Glu Asn Leu Ala Ala Gly
289 65 70 75 80
291 Asp Thr Ile Ser Val Thr Ser Ser Ala Met Val Leu Glu Asn Leu Ile
292 85 90 95
294 Gly Lys Phe Met Thr Ser Phe Ala Glu Lys Asn Ala Asp Gly Gly Asn
295 100 105 110
297 Ala Glu Lys Ala Ala Glu
298 115
300 <210> SEQ ID NO: 11
301 <211> LENGTH: 858
302 <212> TYPE: DNA
303 <213> ORGANISM: Neisseria meningitidis
305 <400> SEQUENCE: 11
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308 tattcagacg gcattccgct gcccgacgga gaacgcctga caccgttcgg caaaaaactg      180
309 cgtgccgcca gtwtggaaga actgcctgaa ttatggaata tcttaaaagg cgagatgagc      240
310 ctggtcggcc cccgcccgcg gctgatgcaa tatctgccgc tgtacgacaa cttccaaaac      300
311 cgcgcgcaag aaatgaaacc cggcattacc ggctgggcgc aggtcaacgg gcgcaacggc      360
312 ctttcgtggg acgaaaaatt cgcctgcgat gtttggtata tcgaccactt cagcctgtgc      420
313 ctcgacatca aaatcctact gctgacggtt aaaaaagtat taatcaagga agggatttcc      480
314 gcacagggcg aacaaccatg ccccttttca caggaaaacg caaactcgcc gtcgtcgggtg      540
315 cgggcgggaca cggaaaagtc gttgccgacc ttgccgcgcg actcggccgg tacagggaaa      600
316 tcgtttttct ggacgaccgc gcacaaggca gcgtcaacgg cttttccgct atcggcacga      660
317 cgctgctgct tgaaaacagt ttatcgcccg aacaatacga cgtcgcgcgc gccgtcggca      720

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Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

VERIFICATION SUMMARY

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L:82 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:85 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:88 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:91 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:97 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:112 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
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L:368 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:770 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
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